APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,083	01/14/2002	Paul Harry Abbott	GB920010052US1	6326

29683 7590 11/09/2006	EXAMINER
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212	WILLIAMS, JEFFERY L

ART UNIT	PAPER NUMBER
2137	

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/050,083	ABBOTT ET AL.
	Examiner	Art Unit	
	Jeffery Williams	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5,7,8,11 and 13-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5,7,8,11, 13-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>29 July 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1   **DETAILED ACTION**

2

3   Claims 1, 2, 5, 7, 8, 11, 13, 14, 15 are pending.

4   All objections and rejections not set forth below have been withdrawn.

5

6   ***Claim Objections***

7

8   Claim 7 is objected to because of the following informalities: The word "key" is

9   missing from within the recitation of "if a public is not available" [line 6]. Appropriate

10 correction is required.

11

12   ***Claim Rejections - 35 USC § 103***

13

14   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

15 obviousness rejections set forth in this Office action:

16   (a) A patent may not be obtained though the invention is not identically disclosed or described as set
17   forth in section 102 of this title, if the differences between the subject matter sought to be patented and
18   the prior art are such that the subject matter as a whole would have been obvious at the time the
19   invention was made to a person having ordinary skill in the art to which said subject matter pertains.
20   Patentability shall not be negatived by the manner in which the invention was made.
21
22   **Claims *1,2,5,7,8,11, 13-23* are rejected under 35 U.S.C. 103(a) as being**

23 **unpatentable over Shear et al. (Shear), "Systems and Methods Using**

24 **Cryptography to Protect Secure Computing Environments", U.S. Patent 6,157,721**

25 **in view of Bodrov, "System and Method of Verifying The Authenticity of**

26 **Dynamically Connectable Executable Images", U.S. Patent 6,802,006.**

1

2   Regarding claim 1, Shear discloses:

3   *a primary library file, the primary library file having a digital signature* (Shear,

4   1:26-28; 2:46-3:3; 4:21-67; Herein, Shear discloses system protection by verifying the

5   digital signatures of basic executables – thus at least one executable module or

6   "primary library file" – of a software installation, for example a virtual machine

7   installation).

8   *a loader program that obtains a digital signature key and further loads the*

9   *primary library file* (Shear, fig. 1:61; 5:1-5; 6:6-11; Herein Shear discloses a device

10 comprising a programmed execution environment – "loader" program – for loading and

11 performing software instructions); *wherein, if a public key cannot be obtained via a*

12 *virtual machine provider, the digital signature key is a hidden public key internal to the*

13 *loader program and, if a public key can be obtained via the virtual machine provider, the*

14 *digital signature key is the public key obtained via the virtual machine provider* (Shear,

15 13:65-14:5; 5:1-5; Herein, Shear discloses both obtaining a hidden public key and

16 obtaining a certificate from the software provider).

17   Shear discloses that an execution environment may execute a plurality of

18 software modules, having digital signatures, of which are verified for authenticity by the

19 programmed execution environment (Shear, 4:1-60), and which may interact with other

20 installed software modules (Shear,3:24-35). Shear however does not explicitly disclose

21 that one installed software module "interacts" other installed software modules via a first

22 module "referencing" second modules from the plurality of modules.

1   Bodrov discloses that software modules, such as digitally signed DLL's defining a

2   software installation, interact via one module referencing another module to be loaded

3   and verified by the secure execution environment (Bodrov, fig. 2; 3:12-24).

4   It would have been obvious to one of ordinary skill in the art to employ the

5   method of Bodrov for interaction between software modules of a software installation

6   within the system of Shear. This would have been obvious, because one of ordinary

7   skill in the art would have been motivated to utilize a practical way for software modules

8   to interact.

9

10   may reference a second "load module" of the plurality of software modules. there

11   may be a plurality of loaded software modules *and a plurality of secondary files*

12   *arranged to be referenced by the primary library file, each of the plurality of secondary*

13   *files having a digital signature* (McManis, fig. 1, elems. 116, 118, 120; col. 2, lines 1,2;

14   col. 3, lines 17-21).

15   *wherein the loader program is verifes and selectively loads the primary library file*

16   *by comparing the obtained digital signature key with the digital signature of the primary*

17   *library file, the primary library file being further arranged to subsequently verify and*

18   *selectively load the plurality of secondary files by calling the loader program to compare*

19   *the obtained digital signature key with the digital signature of each of the plurality of*

20   *secondary files* (Shear, fig. 3; 6:5-15; Bodrov, fig. 1).

21

1   Regarding claim 2, the combination of Shear and Bodrov discloses a plurality of

2   software modules (i.e. DLL files), wherein at least one module references a plurality of

3   secondary modules, and wherein all modules are loaded and verified (See above

4   rejection). However, the combination does not disclose that a referenced secondary

5   module may reference another, or 3rd, module. However, it was well known to those of

6   ordinary skill in the art that a referenced module (i.e. DLL), may reference another

7   module (i.e. DLL).

8

9   Regarding claim 5, the combination of Shear and Bodrov discloses:

10   *at least one administrator-configurable file* (Shear, fig. 1:52,64; 3:32-35; 4:38,39

11   – the combination disclose files that are configured by administrators).

12   *the digital signature key comprising a number of keys including a private key*

13   *provided by an administrator* (Shear, fig. 7, 8)

14   *wherein the loader program verifies the digital signature of the at least one*

15   *administrator-configurable file using the private key* (see above rejections – all files are

16   verified).

17

18   Regarding claim 14, the combination of Shear and Bodrov discloses:

19   *the virtual machine provider is accessed through an internet site to provide the*

20   *public key* (Shear, fig. 1; Abstract). It is obvious to one of ordinary skill in the art for the

21   use of an internet to transmit a key.

22

1   Regarding claim 16, the combination of Shear and Bodrov discloses:

2   *wherein the primary library file is a virtual machine dynamic link library file*

3   (Shear, 2:54-3:3; Bodrov, fig. 1)

4

5   Regarding claim 18, the combination of Shear and Bodrov discloses:

6   *wherein the loader program is a third-party application that initiates the virtual*

7   *machine installation* (Shear, fig. 1:61; fig. 3; Bodrov, fig. 1:95).

8

9   Regarding claim 19, the combination of Shear and Bodrov discloses:

10   wherein the loader program is a virtual machine launcher that initiates the virtual

11   machine installation (Shear, 2:54-3:3; 4:36-40; Bodrov, fig. 1).

12

13   Regarding claims 7, 8, 11, 13, 15, 17, 20, and 21, they are method claims

14   corresponding to the above rejected claims and contain essentially similar limitations,

15   and they are rejected, at least, for the same reasons. Furthermore, the combination

16   discloses "launching a loader program" (Shear, fig. 3; Bodrov, fig. 1).

17

18   Regarding claims 22 and 23, they are system claims corresponding to the above

19   rejected claims and contain essentially similar limitations, and they are rejected, at least,

20   for the same reasons.

21

1   *Rsponse to Arguments*

2

3   Applicant's arguments with respect to the pending claims have been considered

4   but are moot in view of the new ground(s) of rejection.

5

6

7   *Conclusion*

8

9   A shortened statutory period for reply is set to expire **3** months (not less than 90

10   days) from the mailing date of this communication.

11   Any inquiry concerning this communication or earlier communications from the

12   examiner should be directed to Jeffery Williams whose telephone number is (571) 272-

13   7965. The examiner can normally be reached on 8:30-5:00.

14   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

15   supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

16   number for the organization where this application or proceeding is assigned is (703)

17   872-9306.

1   Information regarding the status of an application may be obtained from the

2   Patent Application Information Retrieval (PAIR) system. Status information for

3   published applications may be obtained from either Private PAIR or Public PAIR.

4   Status information for unpublished applications is available through Private PAIR only.

5   For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

6   you have questions on access to the Private PAIR system, contact the Electronic

7   Business Center (EBC) at 866-217-9197 (toll-free).

8

9
10   J. Williams
11   AU: 2137
12   JW

EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER